IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:
Applicant(s): Jean-Francois Frigon

Serial No.: 10/021,220

Filed: December 11, 2001

For: Method For Synchronization In Wireless Systems Using Receive Diversity

Attorney
Docket No.: 7416/91984

Group No.: 2611

Confirmation No.: 1112

Examiner: Juan A. Torres

CERTIFICATE OF MAILING

I hereby certify that this paper is being deposited with the United States Postal Service as First Class mail in an envelope addressed to: Commissioner For Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this date:

8/14/2006
Date Registration No.: 39,724
Attorney for Applicant(s)

DECLARATION PURSUANT TO RULE 37 C.F.R. 1.132

Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

I, Jean-Francois Frigon declare unequivocally:

1. That I am the named inventor of U.S. Patent Application Serial No. 10/021,220, filed on December 11, 2001.

2. The known diversity techniques disclosed in the present application comprise selection diversity, switched diversity, maximal ratio combining (MRC) and equal gain combining (EGC). These disclosed known methods require knowledge of the channel state.

3. The disclosed known selection diversity and switched diversity techniques rely on an estimate of the instantaneous signal to noise ratio (SNR) of the diversity branches. See Application, paragraphs 0038 and 0039. Knowledge of the channel state is required to obtain this estimate of the SNR of the M diversity branches.

4. The disclosed known technique for MRC relies on combining weights (Gi). See Application, paragraph 0040. These combining weights are a function of the relative channel phases and SNR of the M diversity branches. Thus, knowledge of the channel state is required implement the known MRC algorithm.

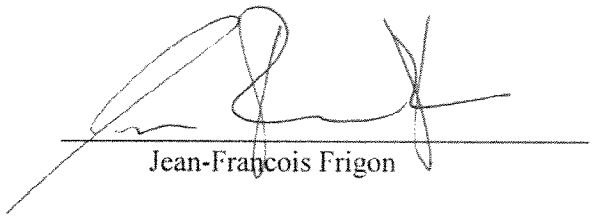
5. The disclosed known technique for EGC does not implement a true maximal ratio combination (MRC). Instead, the branch weights are all set to unity, but the signals from each branch are co-phased to provide equal gain combining. See Application, paragraph 0041. The co-phasing coefficients are a function of the relative channel phases of the M diversity branches. This requires knowledge of the channel state to find the co-phasing coefficients.

6. The channel state of the M diversity branches is typically obtained at the mobile device by demodulating and processing a known pilot sequence sent by the base station. However, the mobile first needs to be synchronized to a base station prior to attempting to demodulate any signal sent from the base station. See Application, paragraph 0003. Therefore, demodulation of the known pilot sequence can only be performed **after** code and frequency synchronization has been achieved.

7. Because the disclosed known diversity techniques require synchronization of the mobile device with the network to be implemented, the disclosed known diversity techniques cannot be used to improve establishing synchronization of the mobile device with the base station. Therefore, the disclosed known diversity techniques are not analogous to known synchronization techniques.

8. That all statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true; and further, these statements were made with the knowledge that willful, false statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code, and that such willful, false statements may jeopardize the validity of the above-identified application or any patent issuing thereon.

Dated: 08/22/2006



Jean-François Frigon